



Environment
Environnement

**MUNICIPAL/INDUSTRIAL
STRATEGY FOR
ABATEMENT (MISA)**

MISA ADVISORY COMMITTEE

ANNUAL REPORT 1990 - 1991

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MISA ADVISORY COMMITTEE FOURTH ANNUAL REPORT

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Province of Ontario
Ministry of the Environment
MISA
Municipal/Industrial Strategy for Abatement
Stopping Water Pollution at its Source

Fourth Annual Report
MISA ADVISORY COMMITTEE

Covering the period from April 1, 1990 to March 31, 1991.

(Including a summary of operations from the inauguration of the Committee in November 1986)

Permanent Membership:

Chair appointed July 1990:

Dr. Isobel Heathcote, Member appointed December 1987

Vice-Chair appointed April 1989:

Mr. Kai Millyard, Member appointed November 1986

Members:

Mr. Harvey Clare, appointed November 1986

Dr. Paul Hebert, appointed November 1986

Ms. Joanna Kidd, appointed April 1989

Dr. Don Mackay, appointed November 1986

Mr. Paul Muldoon, appointed April 1989

Former Members appointed November 1986:

Dr. Douglas Hallett, Member and Chairman to October 1987

Dr. Monica Campbell, Member to May 1988

Ms. Toby Vigod, Member and Vice-Chairman to January 1989

Mr. James MacLaren, Member and Chairman to June 1990

Staff Members:

Scientific and Technical Coordinator:

Mr. Michael Seto, February 1991 to date.

Mr. Steven Klose, November 1990 to January 1991.

Ms. Yasmin Tarmohamed, September 1989 to October 1990.

Mr. Doug Vallery, April 1987 - September 1989

MISA ADVISORY COMMITTEE

FOURTH ANNUAL REPORT 1990-1991

OUTLOOK

The past year of MISA Advisory Committee operations has seen the completion of Phase 1 of the MISA Program. Effluent monitoring regulations and data collection for all industrial sectors will have been completed by early August 1991.

The nine industrial sectors are proceeding on slightly different schedules.

For most sectors, the current schedule indicates the completion of a Draft Effluent Limits Regulation by late 1991 to early 1992. The Draft Regulations should be available for Public Review by 1992. It is anticipated that the Regulations will incorporate aspects of pollution prevention as an important step towards MISA's ultimate goal of zero discharge of persistent toxic chemicals to Ontario waterways.

During 1990 members of the MISA Advisory Committee were involved in the deliberations of the Issues Resolution Committees (IRC). These Committees were set up by the Ministry to establish, with industry participation, a resolution to sixteen fundamental issues common to the development of all effluent limits regulations.

In June 1990 the MISA Issues Resolution Process Committee Report was released for public review. The MISA Advisory Committee, industry and various public interest groups commented on the Draft IRC Report. The public review comments and the Ministry responses have been incorporated into the Draft Report of December 1990. This report is currently awaiting the Minister's review. The Issues Resolution Process Final Report Summary was published in September 1991.

At the end of the Issues Resolution Process, the procedures and criteria for regulation development will be standardized. This will then allow the Joint Technical Committees to apply these procedures and criteria to each sector in drafting the Effluent Limits Regulation requirements.

During the coming year the Committee looks forward to the participation of its members as individual observers on the various joint technical committees charged with developing specific sector effluent limits regulations. In view of the anticipated level of activity, the Committee anticipates continuation of its bi-weekly meeting schedule.

The Committee believes that it continues to contribute to the development of the MISA Program in a positive fashion and looks forward to continuing its role as a group of independent scientific and policy experts reviewing and advising on proposed regulatory principles and procedures.

ONTARIO MINISTRY OF THE ENVIRONMENT MISA ADVISORY COMMITTEE

FOURTH ANNUAL REPORT 1990-1991

Covering the fiscal year April 1, 1990 to March 31, 1991.

(Including a summary of operations of the Committee from November 1986)

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**MISA - MUNICIPAL INDUSTRIAL STRATEGY FOR ABATEMENT
- STOPPING WATER POLLUTION AT ITS SOURCE-**

1. INTRODUCTION

The **MISA Advisory Committee (MAC)** was established by the Minister of the Environment in late 1986, primarily to provide independent expert advice on the content of draft regulations being developed under the **MISA Program** of the Ontario Ministry of the Environment. While members of the committee are considered independent and represent only their individual expertise and experience, the operation of the committee serves to represent and protect the public interest by providing a third party opinion on the direction of water quality regulation in the Province of Ontario.

2. MANDATE OF THE MISA ADVISORY COMMITTEE

By Order-in-Council 2766/86 (October 23, 1986) pursuant to Clause 3(i) of the Environmental Protection Act (EPA), R.S.O. 1980, c. 141, the **MISA ADVISORY COMMITTEE** was established to provide advice to the Minister of the Environment in accordance with the White Paper "Municipal-Industrial Strategy for Abatement" released in June 1986 and more particularly:

- (a) to review draft regulations relating to monitoring and effluent limits prepared by the sectoral technical committees;
- (b) to liaise and work with the technical committees;
- (c) to provide advice and recommendations to the Minister on the content of the regulations;
- (d) to provide advice with respect to such other related matters as the Minister may prescribe.

The Committee was created solely to provide advice to the Minister upon request of the Minister; the Minister is not obligated to accept the **Advisory Committee's** advice and recommendations, but will take the Committee's advice into account when finalizing regulations. Subject to the EPA, and any Order-in-Council, the Ministry agrees to respect the independence that the Committee requires in order to carry out its advisory function. In accordance with Ontario government policy concerning the sunset review of advisory agencies, the existence of the committee was reviewed in advance of its expiration date of October 22, 1989 and the term of all members of the Committee and its function renewed until October 22, 1992 by Order-in-Council 2746/89.

3. COMMITTEE MEMBERSHIP

The following members were appointed by Order-in-Council 2997/86, dated November 13, 1986, to the **MISA Advisory Committee**, pursuant to Clause 3(i) of the Environmental Protection Act, for a term ending on the 22nd day of October, 1989:

Dr. Douglas Hallett of Acton - as Chairman,	Ms. Toby Vigod of Toronto - as Vice-Chairperson,
Dr. Monica Campbell of Toronto	Mr. Harvey Clare of Toronto
Dr. Paul Hebert of Windsor	Dr. Don Mackay of Toronto
Mr. James MacLaren of Toronto, and	Mr. Kai Millyard of Ottawa

For business reasons, Dr. Douglas J. Hallett resigned as chairman and member of the Committee effective October 23, 1987. By Order-in-Council 2448/87, dated November 5, 1987, Mr. James MacLaren was appointed chairman of the Committee to replace Dr. Hallett. As well, by Order-in-Council 2629/87, Dr. Isobel Heathcote of the University of Toronto was appointed as a new committee member to fill the vacant position.

Dr. Monica Campbell resigned from membership on the committee as of May 1988, and Ms. Toby Vigod resigned as Vice-Chairperson and member as of January 1989. In order to replace these vacancies, Ms. Joanna Kidd and Mr. Paul Muldoon were appointed as members, and Isobel Heathcote and Kai Millyard were appointed as co-vice chairpersons by Order-in-Council 1002/89, April 1989.

Mr. James MacLaren was appointed as the Chairman of the newly created Ontario Water Services Secretariat effective July 1, 1990, and thus resigned as Chairman of the Committee. Dr. Isobel Heathcote was appointed as Chair of the Committee effective July 15, 1990 by Order-in-Council 1849/90.

All members of the **MISA Advisory Committee** are compensated according to Level 11 of Ontario Management Board Directives 6-1 (Sept. 1989) and are required to abide by Management Board Guidelines and Directives, including those related to conflict of interest.

A representative from each industrial sector, appointed by the Minister of the Environment through consultation with the sector, is to be a full member of the **MAC** when regulations pertaining to that sector are being reviewed. When matters pertaining to the municipal sectors are being reviewed, a representative of each of the Association of Municipalities of

Ontario, and the Municipal Engineers Association, appointed by the Minister through appropriate consultation, will be members of the Committee.

During this reporting period, those confirmed industrial representatives who have attended MAC meetings or who have been tentatively appointed to serve on the Committee are as follows:

- **Electric Power Generation represented by Ontario Hydro:**
Mike Northfield
- **Iron & Steel Sector represented by the Canadian Steel Environmental Assoc. (CSEA):** Al Schuldt
- **Metal Casting Sector represented by the Metal Casting Environmental Committee (MCED):** Ian Hennessy
- **Mining Sector represented by the Ontario Mining Association (OMA):** Maxine Wiber, Brian Bell and Elizabeth Gardiner
- **Municipal Sectors represented by the Assoc. of Municipalities of Ontario (AMO) and the Municipal Engineers Association (MEA):**
Milt Sather, CAO, City of Guelph (AMO)
Len Yust, Director of Pollution Control, Regional Halton (MEA)
- **Organic and Inorganic Chemical Manufacturing Sectors represented by:** Don Kerr
- **Petroleum Refinery Sector represented by the Ontario Petroleum Assoc. (OPA):** Robert Fern
- **Pulp & Paper Sector represented by the Ontario Forest Industries Assoc. (OFIA):** Mickey Devine

As well, MISA Advisory Committee members are appointed as 'observers' to the Joint Technical Committees. The observers are responsible for keeping abreast of JTC business, and for acting as liaison between the JTCs and MAC. Due to the fact that generally MAC members have full-time careers elsewhere, their attendance at JTC meetings is optional, and they rely on the timely issuance of minutes and documentation to keep them up-to-date on JTC activity. The following is the current roster of MAC observers to the JTCs:

Petroleum Sector: Harvey Clare

Organic Chemical Manufacturing: Don Mackay

Mining Sector: Harvey Clare

Pulp & Paper Sector: Isobel Heathcote

Iron & Steel Sector: Joanna Kidd

Metal Casting Sector: Isobel Heathcote

Inorganic Chemical Manufacturing Sector: Paul Hebert

Municipal Sector: Kai Millyard

Electrical Power Generation: Paul Muldoon

Industrial Minerals Sector: Paul Muldoon

4. COMMITTEE OPERATIONS

The Committee is bound by its Memorandum of Understanding (MOU), signed in May 1988 as a form of agreement between the Minister, the Deputy Minister and the Committee. Based on the re-establishment of the Committee following sunset review, the Memorandum of Understanding was modified. In addition, the Committee has prepared more detailed Operating Procedures, which are modified from time to time. The Committee's office is located at 112 St. Clair Avenue West, Suite 502, Toronto, Ontario M4V 1N3 (Telephone No. 416-965-1400).

The Committee's regular meetings are scheduled for the second and fourth Fridays of each month, but it may convene at other times depending on the workload. In terms of workload planning, the Committee is dependent for the most part on the Ministry's adherence to the MISA Regulatory Development schedule and to the timely provision of background information and documentation.

During the past fiscal year, the MISA Program continued its activities in the Issues Resolution Process in support of the MISA Effluent Limits Regulations. This initiative activity required extensive participation of individual committee members. Thus, the need for regular meetings of MAC had to be somewhat reduced to accommodate this activity. There were fifteen MAC meetings during this reporting period.

5. ADVICE TO THE MINISTER

The MISA Advisory Committee's Advice to the Minister and Committee responses to referrals from the Minister constitute the Committee's primary contribution to the MISA Program.

During the course of the year, the Committee's primary focus was direct participation in the Issues Resolution Process as directed by the Minister.

The process involved the development of responses to sixteen issues relating to the development of effluent limits regulations. The intent is that at the end of the Issues Resolution Process (IRP), the procedures and criteria for regulation development will be standardized. The Joint Technical Committees would apply these procedures and criteria to each sector in developing consistent Effluent Limits Regulations.

The Issues Resolution Committees developed responses to the sixteen issues. These IRP reports were presented in a Summary Report, "MISA ISSUES RESOLUTION PROCESS", prepared by MISA program staff. The

summary report was subsequently provided for review. A significant amount of time was spent by the Committee in the review and preparation of responses to the IRP Summary Report.

The Issues Resolution Process Final Report Summary was published by the Ministry in September 1991.

Due to the change in government in the fall of 1990, the Committee provided the incoming Minister's Office with comprehensive briefing notes on the MISA Program.

In addition, the MISA Advisory Committee and the Advisory Committee on Environmental Standards provided the Minister with a Summary of Issues and a Plan of Action regarding Zero Discharge and Virtual Elimination of toxic substances.

The Committee's Advice to the Minister is summarized and presented in Appendix B.

6. COMMITTEE MEETINGS

As of March 31, 1991, the **MISA Advisory Committee** has held seventy-two meetings since its inception. Minutes are available to **MISA** participants and to the public on request. Minutes are routinely distributed to MOE Senior Management, MISA Managers and Sector representatives to **MAC**. Minutes for the period are bound and generally include background documents which are pertinent to Committee discussions.

In addition to a specific meeting Agenda, the **MISA Advisory Committee** periodically publishes an "Outstanding Issues List" which acts as an agenda of continuing items and which briefly describes the nature and status of issues which have been brought to **MAC**'s attention and on which **MAC** intents to act. As of mid-1991, major continuing items or issues which have appeared on the "Outstanding Issues List" are:

1. The **MISA Municipal Program** remains a major priority of the Advisory Committee. During the past year, five municipalities have been involved in the Sewer Use Program demonstration projects which are in progress. These demonstration projects will lead to the derivation of local limits. The Advisory Committee is most interested in participating in a strong consultative process leading to an effective sewer use control program and the optimized operation of sewage treatment plants.

2. The MISA Analytical Program remains a primary interest of the MISA Advisory Committee. The Committee has reviewed several Interlaboratory Study Reports during the past year and continues to watch the results of the round-robin program closely. The purpose of the QA/QC program conducted by the Ministry is to ensure the collection of accurate and comparable data in the MISA Effluent Monitoring Program. The Committee has expressed concern regarding the QA/QC program and the Interlaboratory Studies, particularly with respect to their application in the setting of effluent limits for the Regulations.
3. The Advisory Committee awaits further details on the concept and development of the MISA Water Quality Track. The Committee believes that this is a very significant aspect of the MISA Program.
4. The Municipal Water Conservation Project was commenced during 1990. The purpose of this study is to reveal the need and benefits to Ontario water resources of the control of pollution emanating from urban communities, as well as the protection of their drinking waters, and the preservation of the physical integrity of their water and sewage works. The costs of the needed conservation programs and their impacts on current user fees is an important finding of this study. The Committee has produced a Summary Report and a more detailed Technical Report, both of which have been submitted to the Minister for her review.
5. Follow-up items as a result of discussion on MISA Regulations and Issues include:
 - status for the Listing/Delisting Process for schedules included in regulations;
 - status of Analytical Methodology Development for selected EMPPL compounds;
 - status of research and development on sampling and analysis and flow measurement protocols;
 - eventual determination of the practical interpretation of "Virtual Elimination" as employed in the **Great Lakes Water Quality Agreement**.

7. BUDGETARY PERFORMANCE

The **MISA Advisory Committee** has operated within its budget during fiscal years 1987-1988, 1988-89, 1989-1990 and 1990-91. Detailed budgetary information is available at the **MISA Advisory Committee** Office.

APPENDICES:

- A. Committee Permanent Membership - Biographical Notes
- B. Advice to the Minister - Summary and Documentation

APPENDIX A

M I S A ADVISORY COMMITTEE PERMANENT MEMBERSHIP

Chair - Dr. Isobel HEATHCOTE

Dr. Heathcote has recently been appointed as an Associate Professor with the University of Guelph, cross appointed between the School of Engineering and the Faculty of Environmental Science. She was formerly Director of the Environmental Studies Program at the University of Toronto and Dean of Women and Director of Residences at University College of the University of Toronto. She has been responsible for coordinating a large interdisciplinary staff in the identification of environmental impacts of water pollution in the Great Lakes and has considerable experience in water quality issues in general, private sector abatement efforts and the public regulatory framework. She is most familiar with the pulp and paper and mining industries and the effects of their effluents, as well as modelling of contaminant transport in aquatic systems.

Vice-Chair - Kai MILLYARD

Mr. Millyard is the National Policy Director for Friends of the Earth and a private consultant. Over the last 6 years as a researcher and advocate for Pollution Probe, he has directed educational programs and influenced public policy on environmental issues ranging from waste management and energy conservation to water pollution control. Through membership in municipal, provincial, national and international boards and government committees, he is familiar with a wide variety of pollution control and regulatory programs.

Member - Harvey CLARE

Mr. Clare is a retired executive with Imperial Oil Limited. From 1969 to 1982, he was the Environmental Protection Coordinator for Imperial Oil; prior to that he held, among other positions, Manager for Planning and Investment Logistics, and Manager for the Refining Coordination Division. Mr. Clare is a past president and founder of the Petroleum Association for Conservation of the Canadian Environment (PACE). He is also a former treasurer of the Conservation Council of Ontario.

Member - Joanna KIDD

Ms. Kidd is an environmental consultant specializing in public involvement techniques, communications and environmental policy research. She was formerly co-chair of the Toronto Waterfront Remedial Action Plan Committee, and is involved in the coordination of public involvement and planning processes for several waste management projects in Ontario. Ms. Kidd is a former staff researcher for the Pollution Probe Foundation, and from 1976 to 1981, was a research coordinator in the field of cancer epidemiology at the Faculty of Medicine, University of Toronto.

Member - Paul HEBERT

Dr. Hebert is Professor of Biology and Chair of the Department of Zoology at the University of Guelph. His research examines a broad range of problems in aquatic biology ranging from work on the ecological impacts of introduced species to studies examining the mutagenic impacts of contaminant exposure on freshwater fish. As a past Director of the Great Lakes Institute, Dr. Hebert has participated in a broad range of projects examining technical and policy issues relating to the Great Lakes environment.

Member - Donald MACKAY

Dr. Mackay is a Professor at the University of Toronto, cross-appointed to the departments of Chemical Engineering and the Institute for Environmental Studies. His research encompasses a range of environment areas, namely the impact of oil spills, the dynamics of organic contaminants - particularly in the Great Lakes ecosystem, and partitioning and solubility studies. His modelling of environmental systems is of particular note with respect to aquatic-based pollution control methods.

Member - Paul MULDOON

Mr. Muldoon is a Hamilton lawyer specializing in environmental and international law. He has lectured on environmental law at McGill University and has written extensively on issues such as an environmental bill of rights, toxic water pollution in Canada and ecosystem management through law reform. Mr. Muldoon is co-author of "Zero Discharge: A Strategy for the Regulation of Toxic Substances in the Great Lakes Ecosystem" and "A Prescription for Healthy Great Lakes".

APPENDIX B

ADVICE TO THE MINISTER

Summary and Documentation

The MISA Advisory Committee's Advice to the Minister is summarized and presented under the following headings:

B.1 MISA ISSUES RESOLUTION PROCESS

- Letter to the Honourable J. Bradley Re: Implications of the Extension of the Review Period for the IRP Report, August 9, 1990.
- Letter to the Honourable J. Bradley Re: MAC's Advice to the Minister on the Issues Resolution Committee Reports, August 20, 1990.
- Letter to the Honourable R. Grier Re: MAC's Final Comments on IRP Report, October 31, 1990.

B.2 MISA PROGRAM

- Letter to the Honourable J. Bradley, Re: Participation of Public Interest Groups in Joint Technical Committees, September 6, 1990.
- Briefing Notes for the Honourable Ruth Grier from MAC, regarding the MISA Program, October 26, 1990.
- Letter to the Honourable Ruth Grier Re: MAC's Review of MISA Program for Options to Expedite Progress, November 8, 1990.
- Letter and Document to the Honourable Ruth Grier MAC's Advice on Options to Expedite and Augment the MISA Program, January 14, 1991.

B.3 MISA ADVISORY COMMITTEE AND ADVISORY COMMITTEE ON ENVIRONMENTAL STANDARDS

- Letter to the Honourable Ruth Grier, MAC and ACES - Summary of Issues and a Plan of Action regarding Zero Discharge and Virtual Elimination of Toxic Substances, January 8, 1991.
- Letter to the Honourable Ruth Grier, MAC and ACES - Update on Issues of Zero Discharge and Virtual Elimination, January 31, 1991.

B.4 MUNICIPAL WATER CONSERVATION

- Letter to the Honourable J. Bradley, Re: MAC's Water Conservation Report and Ministry of Natural Resources' Proposal, August 20, 1990.
- Letter and Document to the Honourable Ruth Grier, Re: MAC's Summary Report on "Water Conservation in Ontario: Implementing the User Pay System to Finance a Cleaner Environment", January 18, 1991.

B.5 THE MISA ANALYTICAL PROGRAM

- Letter to the Honourable J. Bradley, Re: MAC's Concern regarding the QA/QC Program, May 8, 1990.

APPENDIX B.1

MISA ADVISORY COMMITTEE CORRESPONDENCE REGARDING THE MISA ISSUES RESOLUTION PROCESS

- Letter to the Honourable J. Bradley Re: Implications of the Extension of the Review Period for the IRP Report, August 9, 1990.
- Letter to the Honourable J. Bradley Re: MAC's Advice to the Minister on the Issue Resolution Committee Reports, August 20, 1990.
- Letter to the Honourable R. Grier Re: MAC's Final Comments on IRP Report, October 31, 1990.



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August 9, 1990

The Honourable Jim E. Bradley
Minister of the Environment
15th Floor
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

Dear Mr. Minister:

The **MISA Advisory Committee** wishes to comment on the implications of the extension of the public consultative period for the MISA Issues Resolution Paper from August 6 to October 31, 1990.

While we sympathize to some extent with the sentiments and frustrations expressed by the Public Interest Groups, we find the delay of a further twelve and a half weeks to be very regrettable and believe that it erodes the credibility of the Program. In our view the Issues Resolution Paper is a guidance document which has served to document some issues in which agreement has been reached, to set out alternatives in other areas and, in the case of "virtual elimination", to identify a fundamental and probably unresolvable difference in opinion.

In our letters to you of January 26, March 16, and April 23 this year, your committee expressed concern about the potential for delay inherent in the Issues Resolution Process. It now appears that our concern was well justified. The responses of the public interest groups are quite predictable and in any case they will have ample opportunity to respond to the proposed limits regulations as they are drafted. These groups knew in April that there would be a standard 30 day response period and could have planned their review efforts accordingly.

We therefore urge you to direct the Petroleum and Organic Chemical JTCs to proceed without delay to develop limits regulations, with a view to reconciling their proposals with the responses to the Issues Resolution Paper in November. On no account should the process be further delayed.

(Yours very truly,

A handwritten signature in cursive ink that reads "Isobel Heathcote".

Dr. Isobel Heathcote
Chairman
MISA Advisory Committee

cc: G. Posen
D. Balsillie
S. Salbach
P. Seto



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August 20, 1990

The Honourable Jim E. Bradley
Minister of the Environment
15th Floor
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

MISA ISSUES RESOLUTION COMMITTEE REPORTS

Dear Mr. Minister:

Further to your request of the members of your **MISA Advisory Committee**, we enclose herewith our comments on the documents relating to the work of the Issues Resolution Committees submitted to us in draft form on July 6th, 1990.

This response was prepared as a result of meetings of your Committee conducted on Wednesday and Thursday, July 11th and 12th. We have directed our comments to the detailed Committee reports and not to the short draft summary report since we consider the former to be the definitive document in providing direction to the Joint Technical Committees.

In MAC's opinion the Issues Resolution Process served the valuable purpose of:

- (i) providing a uniform approach to issues which should not be resolved differently from industry to industry,
- (ii) exposing the many issues which will be faced when the JTCs work on the limits regulation,
- (iii) resolving a large number of potentially contentious issues which would have otherwise required time-consuming negotiations and discussion by each JTC, thus delaying the entire process,
- (iv) providing a forum in which the various actors in the process have become better acquainted and sensitized to the views and priorities of other participants, and finally
- (v) highlighting a number of key issues which remain unresolved and which we expect can be resolved on a sector-by-sector basis in future discussions.

The reports which you have submitted to us provide a record of this process and will serve as invaluable guidance documents in the upcoming limits-setting process. We find that the reports are somewhat "rough"; at times inconsistent, incomplete and repetitive, but we fully appreciate that they have been prepared under severe time constraints by a number of authors, and that there has been insufficient time to prepare a thoroughly polished document. Indeed, we commend the Ministry staff and the industrial representatives on their accomplishment in getting the essential record into print in such a timely manner.

Accordingly, we have grouped our comments into (I) recommendations for changes in the Issues Resolution Report and (II) step-by-step comments on the various resolutions and on the unresolved issues.

We have the following general recommendations for changes in the Issues Resolution Report:

- MAC suggests that the full 253 page report (Issue Resolution Committee Reports), with minor corrections and clarifications made in the light of public and other responses, should be re-issued as a record of the Issues Resolution Process. A corrected short summary report similar to the short 52-page report should also be prepared for general distribution which can refer interested readers to the full report. After the public response period, the Ministry should immediately compile the public responses, including comment from MAC, and publish them with appropriate commentary and response, thus providing the JTCs with a full record of the consultative process. Time is of the essence, so we recommend against any report revision procedures which will delay the overall MISA process, or place any further burden on MISA office staff.
- There is no doubt that we must consider MISA as a "staged" process with its ultimate goal the virtual elimination of persistent toxic contaminants in discharges to Ontario's waterways. However, the precise goals, objectives, and timing of each stage have not been articulated clearly in this or other documents. MAC recommends including such a statement in the Re-issued Issues Resolution Committee Reports document. An example of one such statement is included in our detailed commentary as Attachment A.
- The eventual revised issues positions should be released as guidelines to the Joint Technical Committees (JTCs) but with the advice that where they are not adhered to in the development of industrial effluent limits regulations the JTCs must fully justify to the Ministry the need for variance.
- The current committee reports are not applicable in many respects to the development of municipal sewage treatment effluent regulations nor to the pretreatment of sectoral industrial effluents discharged to municipal sewerage system. A separate and specific document should be prepared for the municipal JTC.
- MAC advises against a uniform five-year review period for all the regulations on the basis that such a requirement will present an unmanageable work load in 1995-1996. Instead we recommend staggering the review periods from 4 years and 6 months to 6 years, so that the review workload can be spread over a longer period.
- MAC considers reform of the old "Certificates of Approval" system to be an essential part of successfully implementing MISA requirements. The law should be amended to prohibit discharge of wastewater without a "pollution elimination permit", which would have to be reviewed and renewed at regular intervals.
- MAC believes that the "interim requirements" concept should be dropped completely. There is far too much work to do in finishing and implementing BATEA requirements without creating new tasks. It is unlikely that pollutant discharge will increase significantly during the interim period; existing Certificates of Approval and Control Orders can continue to be enforced until the new MISA BATEA requirements come into force.

Our detailed comments on each step are attached herewith. Where alternatives have been presented, we indicate support for one or, in some cases, suggest an additional alternative for consideration.

We wish to bring to your attention yet again our concern that the MISA process proceed expeditiously. We are particularly concerned that prolonged delays may result from discussions about the philosophy inherent in "virtual elimination", from overly detailed consideration of many BAT options and their economic achievability, and from delays with the approval process. In the detailed comments, we particularly address these issues with a view to streamlining and accelerating the process. We recommend that you, as Minister, direct the JTCs to proceed expeditiously to establish the limits regulations so that the much needed reduction in effluents can be effected as soon as possible. To facilitate this, MAC hopes that you will make these comments available to Ministry staff, industrial representatives and public interest groups, as soon as possible.

We trust the foregoing will be of assistance and your committee would be pleased to discuss the report with you and your staff.

Respectfully submitted,



Dr. Isobel Heathcote, Chair
for the MISA Advisory Committee

Encl.

**DETAILED COMMENTS ON MISA ISSUES RESOLUTION PROCESS
ISSUE RESOLUTION COMMITTEE REPORTS**

**Prepared by the
MISA ADVISORY COMMITTEE**

August 20, 1990



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October 31, 1990

The Honourable Ruth Grler
Minister of the Environment
135 St. Clair Avenue West
15th Floor
Toronto, Ontario
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Dear Madam Minister:

On August 20, 1990, the **MISA Advisory Committee** submitted draft comments on the Guidance Document for the Issue Resolution Process.

Today marks the end of the public review period for the Guidance Document. MAC would therefore like to confirm its earlier comments, and to make a single minor correction in wording on an essential point.

On page 15 of MAC's comments (Toxicity; Step 9), we state under Consequences of Falling Toxicity Tests that "MAC strongly recommends adoption of Alternative 1...MAC believes that failure to meet both tests should result in enforcement action."

Upon reflection, MAC believes that this wording is unclear and should be modified to read: "...failure to meet either test should result in enforcement action."

We hope that this clarification is helpful in your review of the fundamental questions inherent in the Issue Resolution Process.

Yours very truly

Isobel W. Heathcote
Chairman
MISA Advisory Committee

cc: G. Posen
D. Balsillie
J. Ashman

APPENDIX B.2

MISA ADVISORY COMMITTEE

CORRESPONDENCE REGARDING THE

MISA PROGRAM

- Letter to the Honourable J. Bradley, Re: Participation of Public Interest Groups in Joint Technical Committees, September 6, 1990.
- Briefing Notes for the Honourable Ruth Grier from MAC, regarding the MISA Program, October 26, 1990.
- Letter to the Honourable Ruth Grier Re: MAC's Review of MISA Program for Options to Expedite Progress, November 8, 1990.
- Letter and Document to the Honourable Ruth Grier, MAC's Advice on Options to Expedite and Augment the MISA Program, January 14, 1991.



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Environment

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Ontario

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September 6, 1990

The Honourable Jim E. Bradley
Minister of the Environment
135 St. Clair Avenue West
15th Floor
Toronto, Ontario M4V 1P5

Dear Mr. Minister:

Your MISA Advisory Committee is pleased to note that the Joint Technical Committees have begun to meet regularly and to discuss the development of MISA limits regulations. The interaction of Ministry staff with industrial representatives provides a useful forum for the resolution of sector-specific issues. As was the case with the monitoring regulation development, MAC members have been included on the JTCs as observers. We have thus been able to indicate early in the discussions areas of potential concern to MAC, and it is our belief that this "early warning" function has been useful in streamlining the ultimate regulation review process.

As we begin discussions on the limits regulations, it seems timely to suggest that the public interest groups could also offer a useful viewpoint at the JTCs. Your committee's view would be that the groups' status could be, like MAC's, as observers. Nevertheless, as such they would have the opportunity to observe and participate in discussions that will be fundamental to regulation development. MAC believes that there is no reason to exclude the groups from the process, and indeed feels that there is considerable merit in including them early in the game.

We hope that you will give this suggestion serious consideration, and would be pleased to discuss it with your office at your convenience.

Yours very truly,

Dr. Isobel W. Heathcote
Chairman
MISA Advisory Committee

cc: G. Posen
D. Balsillie
S. Salbach

BRIEFING NOTES FOR THE HONOURABLE RUTH GRIER
FROM THE
MISA ADVISORY COMMITTEE
(October 26, 1990)

The MISA Advisory Committee (MAC) was established in late 1986 to provide advice to the Minister of the Environment on MISA, the Ministry's flagship program for water pollution abatement in Ontario. Our members (see appendix) bring a variety of expertise from the public and private sectors. They do not, however, represent the views of any particular stakeholder groups such as the public, industry, or the academic community.

The MISA program is critical to the remediation of Great Lakes contamination. Lengthy delays in the process have been frustrating, particularly to the public, and are of utmost concern to MAC. We are now entering the most challenging stage of the program: the development of regulations to limit industrial and municipal discharges.

A number of major issues will confront you as Minister of the Environment. In the following paragraphs, the MISA Advisory Committee lists in order of decreasing priority those issues which it considers most deserving of your attention.

1. Delays in the MISA schedule are discouraging for the public and for MISA staff alike. MAC believes that ways can must be found to "fast-track" the process and achieve tangible results in a shorter time frame than is presently envisaged.
2. The municipal sector is probably the single largest polluter group in the Province. Progress in this sector is stalled. While costs of sewer use programs may be affordable, the potential remediation costs for sewage treatment plant upgrading are staggering. The municipalities themselves are largely unaware of what they may be facing in terms of technologies or costs.
3. Completion of the multi-stakeholder Issue Resolution Process will be required within the next one to two months.
4. Programs to promote water conservation are essentially non-existent in Ontario. The lack of user pay systems has led to cost inequities and rapidly deteriorating infrastructures. Regulatory agencies must work together to promote water conservation as a Province-wide initiative.
5. Some time ago, MISA's "water quality track" was deferred to a future stage, limiting MISA's current work to end-of-pipe concerns. However, protection of particularly sensitive aquatic environments can only be guaranteed when the water quality track is restored.
6. MISA's emphasis on Best Available Technology (BAT) may fail to force the development of better, even zero-discharge technologies.
7. Ontario is a member of the Great Lakes community, but it often fails to share information fully and effectively with other members of the community. As a result, unnecessary work may be undertaken, and unnecessary dollars and time spent, on research underway in other jurisdictions.

A summary of MAC's views on these key issues follows. We would be happy to provide more detailed advice to you on any of these or other issues.

1. **Delays In the MISA Schedule:** The MISA program has experienced numerous delays over its four year lifespan. Most of these occurred for good reasons: the Ministry was breaking new ground. The task was even larger than initially envisioned.

However, MAC believes that it is now critical to get on with the job of virtual elimination of toxic discharges. In particular, we believe that it is desirable to demonstrate tangible reductions in discharges of toxic chemicals within the next two years. This could be achieved in several ways:

- **Establish short-term, achievable goals.** MAC notes that the overall task of MISA is ambitious and even overwhelming. We sense that MISA staff are themselves disheartened by the magnitude of the task and the lack of measurable progress. MAC therefore suggests that care be taken to establish a series of short-term, achievable goals against which progress can be measured by MISA staff, by industry, and by the public. These goals might involve staged reductions in discharges over a period of time, or simply better communication about interim goals to the public.
- **Revise existing Certificates of Approval for Known "Bad Actors".** In many cases, the "best available technologies" are already well understood. MAC believes that as a result of the monitoring programs many industries have already accepted the need for improvement, and should be encouraged or required to install necessary technologies soon through existing control/enforcement mechanisms. This would have the advantage of imposing a minimum level of treatment across the board and should produce a dramatic and immediate improvement for particular plants or sectors. (Note: This is simply a short-term measure. In the longer term, MAC believes that the existing C. of A. process should be eliminated and replaced with a permit system.)

In particular, require non-toxic effluents for known bad actors within two years. The "bottom line" for environmental remediation is the impact of reductions on the Great Lakes ecosystem. Non-toxic effluents would be a significant step towards that goal. (Note: for some sectors, particularly the municipal sector, the costs of implementing this may be staggering. Nevertheless, other sectors may be able to achieve progress on this at reasonable cost.)

Implementation of any of these suggestions may result in criticism that the MISA consultative process has been subverted. Care must be taken to ensure that these initiatives are not perceived as contradicting the interactive spirit of the MISA regulation development process.

2. **The Municipal Sector: The Biggest Polluter**

While industries undeniably contribute significant quantities of many pollutants, it is likely that in many cases the municipal sector discharges pollutant loads that are tens or hundreds of times larger than those arising from specific industrial sectors. Much of the pollutant load from the municipal sector has its origin in indirect dis-

charges by industrial users to municipal sewer systems. These indirect discharges must be curtailed if loads from the municipal sector are to be reduced.

MAC notes, however, that municipalities have not been involved in the MISA consultative process to the same extent that industries have. The costs of some of these proposals in some municipalities are potentially staggering, and municipalities may be largely ignorant of what they may be facing. In many cases, cost estimates are available now and should be communicated to the municipal sector so that long-term planning for financing can begin immediately. (This issue is intimately linked to the need for full-cost pricing of water and sewage services; see Water Conservation below.) The apparently moribund Joint Technical Committee for the Municipal Sector should be resurrected for this purpose.

MAC's specific advice is as follows:

- **Drop the proposed monitoring regulation for the municipal sector.** (Recent discussions with MISA staff suggest that this suggestion may already have been adopted).
- **Require immediate implementation of secondary treatment and non-toxicity of whole effluents at all Ontario sewage treatment plants.** This proposal is likely to have enormous cost implications for some municipalities and must be linked to pricing reforms; see Water Conservation section below.
- **Require that municipalities proceed expeditiously towards implementation of sewer use control programs requiring industrial pretreatment of indirect discharges.** This could be accomplished quickly through adoption of the Ministry's model sewer use by-law. MAC believes that the public would heartily support such an initiative and would work energetically towards its implementation.

3. **Completion of the Issue Resolution Process:** By the end of October, all interested parties must respond to the Guidance Document prepared by the Issue Resolution Committees. The document contains a number of unresolved issues. Responses may include support of one or another of the various alternatives presented in the guidance document or, as was sometimes the case in MAC's own response, suggestion of a different solution altogether.

This situation is complicated by the fact that, although no response has yet been received from industry or the public interest groups (MAC submitted its comments in mid-August), a detailed draft regulation has been prepared by Ministry staff incorporating only Ministry positions. While this document may have been prepared with a view to adherence to the MISA schedule, MAC is concerned that its existence in such detailed form makes it appear that the Ministry has bypassed the consultative process altogether. Considerable revision may be necessary to respond to stakeholder comments, or to provide for "fast-tracking" of the process (see below).

Ultimately, the Minister must choose among conflicting possibilities without alienating those who hold opposing views. This process might be facilitated if you were to meet with each group privately to hear their concerns. In MAC's view, significant divergence of opinion exists on a number of points. The following are those that have been of greatest concern to MAC. (For a more detailed

Discussion of these points, refer to our letter to Jim Bradley on the subject dated August 20, 1990):

- **Definition of "Virtual Elimination":** MAC has taken the position that "virtual elimination" means a preventive approach that suggests that certain categories of persistent toxic substances would be phased out from their use and discharge within industrial processes.
- **Form of Limits (e.g. production-based loads vs. total loads vs. concentration):** MAC believes that concentration- or production-based limits (e.g. kg per tonne) may allow unchecked expansion of existing facilities and their pollutant loads. We believe that total loads must also be imposed on all dischargers.
- **The Need for Interim Limits:** MAC does not support the development of interim limits, believing that they will merely waste time and effort during a period when pollutant discharges are unlikely to increase.
- **The Need to Replace the Existing Certificate of Approval System:** MAC believes that the law should be amended to prohibit discharge of wastewater without a "pollution elimination permit" which would have to be reviewed and renewed at regular intervals.

4. The Need for a Coordinated Approach to Water Conservation in Ontario:

Tied to the issue of municipal pollutant loads is the problem of water conservation, or lack of it, in Ontario. The public has a clear interest in this problem, for two reasons. First, municipal sources are probably responsible for more impairment of recreational uses than are industrial sources, through combined and storm sewer overflows and municipal sewage treatment plant bypass. But more importantly, the longstanding lack of full cost pricing of water and sewerage in Ontario has contributed to deteriorating infrastructures and wasteful water practices.

Several initiatives are currently planned to encourage water conservation and "user pay" systems. The City of Toronto recently passed a bylaw containing provisions for a water conservation plan for the City. The Ministry of Natural Resources has prepared a draft proposal entitled "Towards a Water Efficient Ontario". MAC supports both programs, with the proviso that we believe water conservation should be a Provincial initiative, requiring Provincial goals and targets, and with clearly defined roles for all players. There is a risk that current proposals will proceed unilaterally and may thus fail because of a lack of coordination with other agencies and the public, who ultimately will pay the bill.

5. Restoration of the Water Quality Track: One of the most exciting aspects of MISA as originally envisioned was the concept that more stringent limits could be imposed to protect particularly sensitive aquatic environments. Several years ago, the "water quality track" was intentionally deferred for reasons of budget constraints. MAC believes that this loss is lamentable. Programs within the Ministry exist which could be modified to provide information on specific environments. One obvious source is the Remedial Action Plans for the IJC Areas of Concern. The RAPs have collected data on pollution sources and solutions in each area

and, with input from the public, are developing schedules to restore beneficial uses. This type of site-specific information is essential for implementation of the water quality track.

It is possible, and has been proposed in the U.S., that goals be set based on human health, wildlife, and habitat considerations. (This is not inconsistent with the water quality track discussed above, but implies a broader "ecosystem" approach.) We might, for instance, decide to work towards a goal of 1 in a million increased risk of cancer in the Great Lakes Basin. This goal can then be translated into ambient concentrations and ultimately to effluent discharge limits, with provision that no backsliding can be permitted if ambient quality is currently good. Considerable work has been undertaken in the U.S. towards this end. We should take advantage of this information so that we do not "reinvent the wheel". A small task force could provide advice on the best way to reconstruct the water quality track efficiently and cost-effectively, in light of the U.S. (and other jurisdictions') experience.

The benefit of the water quality track is that it forces us to look at the ultimate receptors of discharges--the biotic and abiotic components of the Great Lakes ecosystem. Where current BAT is not enough to achieve necessary reductions, the water quality track will force the installation of better technologies (and see next point).

6. **The Need for Technology-Forcing Legislation:** MAC believes that a significant weakness of any BAT-based regulatory system is that it fails to encourage the development of better, even "zero discharge", technologies. We must not lose sight of the capability of technology to improve and adapt to changing requirements. Eventually, the water quality track may provide the necessary justification to impose technology-forcing requirements.

In the short term, reduction of pollutant use at source may prove to be economically beneficial to industries, and therefore may encourage the implementation of technologies beyond BAT. For example, in the U.S., many states are now adopting Pollution Prevention Planning programs to encourage industry to reduce the use of toxics. Typically, these programs are directed at having industries prepare a confidential plan to reduce toxic use by, say, 50%. The plan is seen only by company representatives and a Pollution Prevention Planner designated by the EPA or state agency, thus protecting proprietary process information.

While industries are not required to implement these plans, it is now clear that many industries are sufficiently persuaded of their benefits to move to source reduction voluntarily. A number of financial incentives and technical assistance programs make this move even more attractive. Companies that choose this route can also have their permit applications "fast tracked" through an otherwise slow process.

7. **Ontario as a Member of the Great Lakes Community:** MAC has sometimes been dismayed at the insular approach taken by MISA staff in various aspects of the MISA program. We in Ontario are part of the Great Lakes community. We must improve the flow of information between the various agencies responsible for

management of the Great Lakes ecosystem. In particular, coordination with federal agencies will become increasingly important, as Environment Canada develops federal effluent regulations under the Fisheries Act and the Canadian Environmental Protection Act. The potential exists for the federal government to duplicate the work of the MISA program. Particular areas of duplication include:

- **Research into regulatory approaches in place or contemplated in other jurisdictions** (e.g. The Ministry seems unaware of initiatives such as Pollution Prevention Planning in Great Lakes states such as Massachusetts, Minnesota, Illinois)
- **Research into control technologies and demonstrated treatment efficiencies.** Although some work, for instance on removal efficiencies for proposed BAT technologies, may need to be re-done or updated, MISA does not need to duplicate all the costly studies already undertaken in other jurisdictions.
- **Duplication of specific legislation** (e.g. federal and provincial regulations for the Pulp and Paper sector)
- **Duplication of standard setting exercises** (as one example, MAC would support the idea of a joint subcommittee with your Advisory Committee on Environmental Standards to ensure good information exchange, particularly with respect to water quality track considerations)

Over the past four years, the Ministry's MISA program has made tremendous progress. Information is now available to identify the key pollution sources and the most promising remedial measures. In many respects, Ontario now leads the Great Lakes community in pollution control.

MAC is concerned that MISA is now showing signs of bureaucratic fatigue, getting bogged down in the details of the administrative process and losing sight of the ultimate goal of reducing toxic discharges.

With the new administration, there is an opportunity to bring a "wind of change" into the system to accelerate the process and encourage simpler, faster, more tangible, more pragmatic clean-up measures achieved through an open process. MAC senses that this is what the public wants and expects from the new government. We are willing to help.

APPENDIX

MISA ADVISORY COMMITTEE PERMANENT MEMBERSHIP

Dr. Isobel Heathcote, Chairman - Dr. Heathcote is currently Director of the Environmental Studies Program at Innis College at University College of the University of Toronto. She has been responsible for coordinating a large interdisciplinary staff in the identification of environmental impacts of water pollution in the Great Lakes and has considerable experience in water quality issues in general, private sector abatement efforts and the public regulatory framework. She is most familiar with the pulp and paper and mining industries and the effects of their effluents, as well as contaminant modelling.

Mr. Kai Milyard, Vice-Chair - Mr. Milyard is the National Policy Director for Friends of the Earth and a private consultant. Over the last 6 years as a researcher and advocate for Pollution Probe, he has directed educational programs and influenced public policy on environmental issues ranging from waste management and energy conservation to water pollution control. Through membership in municipal, provincial, national and international boards and government committees, he is familiar with a wide variety of pollution control and regulatory programs.

Mr. Harvey Clare, Member - Mr. Clare is a retired executive with Imperial Oil Limited. From 1969 to 1982, he was the Environmental Protection Coordinator for Imperial Oil; prior to that he held, among other positions, Manager for Planning and Investment Logistics, and Manager for the Refining Coordination Division. Mr. Clare is a past president and founder of the Petroleum Association for Conservation for the Canadian Environment (PACE). He is also former treasurer of the Conservation Council of Ontario.

Ms. Joanna Kidd, Member - Ms. Kidd is an environmental consultant specializing in public involvement techniques, communications and environmental policy research. She is currently co-chairing the Toronto Waterfront Remedial Action Plan Committee, and is involved in the coordination of public involvement and planning processes for several waste management projects in Ontario. Ms. Kidd is a former staff researcher for the Pollution Probe Foundation, and from 1976 to 1981, was a research coordinator in the field of cancer epidemiology at the Faculty of Medicine, University of Toronto.

Dr. Paul Hebert, Member - Dr. Hebert is a Professor of Biology and the Chairman of the Department of Zoology at the University of Guelph. He specializes in population biology of aquatic organisms, particularly in response to toxic contamination. His latest research efforts have concentrated on contamination of the Huron-Erie Corridor and other Great Lakes locations and encompass a range of technical and policy aspects.

Dr. Donald Mackay, Member - Dr. Mackay is a Professor at the University of Toronto, cross-appointed to the departments of Chemical Engineering and the Institute for Environmental Studies. His research encompasses a range of environmental areas, namely the impact of oil spills, the dynamics of organic contaminants - particularly in the Great Lakes ecosystem, and partitioning and solubility studies. His modelling of environmental systems is of particular note with respect to aquatic-based pollution control methods.

Mr. Paul Muldoon, Member - Mr. Muldoon is a Hamilton lawyer specializing in environmental and international law. He has lectured on environmental law at McGill University and has written extensively on issues such as an environmental bill of rights, toxic water pollution in Canada and ecosystem management through law reform. Mr. Muldoon is co-author of "Zero Discharge: A Strategy for the Regulation of Toxic Substances in the Great Lakes Ecosystem".



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November 8, 1990

The Honourable Ruth Grier
Minister of the Environment
135 St. Clair Avenue West
15th Floor
Toronto, Ontario
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Dear Madam Minister:

Further to our meeting of October 29, I write to inform you that your **MISA Advisory Committee** has begun to review the overall progress of the MISA program with an eye to recommending specific procedural and structural changes to expedite progress.

You and I discussed some of the available options at our meeting; others may exist. MAC will "brainstorm" the problem at a meeting on November 21 and hopes to have a set of proposals ready for you by mid-December. Events may overtake this schedule. If so, you may of course call on us at any time to provide advice or information in the interim.

I was greatly encouraged by the concern and energy you demonstrated at our meeting, and look forward to working with you on developing a new "vision" of MISA for the future.

Yours very truly,

A handwritten signature in cursive ink, appearing to read "Isobel W. Heathcote".

Isobel W. Heathcote
Chairman
MISA Advisory Committee

cc: G. Posen
 G. Ronan
 J. Ashman



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January 14, 1991

The Honourable Ruth Grier
Minister of the Environment
15th Floor
135 St. Clair Avenue West
Toronto, Ontario
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Dear Mrs. Grier:

Your **MISA Advisory Committee** is pleased to present herewith its advice on options to expedite and augment the MISA program.

The document contains recommendations covering a number of broad themes and specific issues. Actions are proposed for all dischargers: direct and indirect; industrial and municipal.

In MAC's opinion, the recommendations of greatest importance and urgency are the following:

1. Restate the goals and objectives of the MISA program, with clear timetables and benchmark targets, placing emphasis on the virtual elimination of toxic discharges to the Great Lakes Basin.
2. Retain the overall structure of the MISA program, but add the following "fast tracking" actions:
 - Require dischargers of toxic effluents to carry out toxicity identification and reduction evaluations in 1991.
 - Encourage implementation of toxicity reduction plans by the end of 1992.
 - Require source reduction (pollution prevention) plans and water audits immediately.

3. Replace C of A system with a "pollution elimination permit" system.
4. Rewrite Certificates of Approval immediately for dischargers not achieving "good" performance relative to the remainder of the sector.
5. Require compliance with existing Certificates of Approval for all direct dischargers as soon as possible, but not later than 1992.
6. Require all municipalities to implement secondary treatment as soon as possible but not later than 1994.
7. Finalize the draft White Paper on indirect industrial use of municipal sewer systems.
8. Require all municipalities to implement the Ministry's model sewer use bylaw in 1991.
9. Implement annual "state of the aquatic environment" reporting.

While some of the recommendations contained in the attached report may have significant cost implications, MAC believes that they are all feasible and within the Ministry's legal authority. If implemented as suggested, these recommendations have the potential to achieve measurable improvements in environmental quality within the next eighteen months, and further significant reductions of discharges (50% or more) by the end of 1994.

MAC believes that there is now an unprecedented opportunity to revitalize the MISA program and to achieve tangible benefits from four years of effort. We trust that these comments will be helpful to you in developing that new "vision" for MISA.

Yours very truly,



Isobel W. Heathcote
Chairman
MISA Advisory Committee

Attach.

ADVICE TO THE MINISTER OF THE ENVIRONMENT
ON
OPTIONS FOR EXPEDITING AND AUGMENTING
THE MISA PROCESS

Prepared by the
MISA Advisory Committee

January 1991

APPENDIX B.3

MISA ADVISORY COMMITTEE AND ADVISORY COMMITTEE ON ENVIRONMENTAL STANDARDS CORRESPONDENCE

- Letter to the Honourable Ruth Grier, MAC and ACES - Summary of Issues and a Plan of Action regarding Zero Discharge and Virtual Elimination of Toxic Substances, January 8, 1991.
- Letter to the Honourable Ruth Grier, MAC and ACES - Update on Issues of Zero Discharge and Virtual Elimination, January 31, 1991.



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January 8, 1991

Honourable Ruth Grier
Minister of the Environment
135 St. Clair Avenue West
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Toronto, Ontario
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Dear Mrs. Grier:

A small number of ACES and MAC members met to discuss the issues of zero discharge and virtual elimination of toxic substances which are central to any effective actions to clean up contamination in the environment. We would like to outline for you the issues raised and our recommendations for a plan of action.

The Great Lakes Water Quality Agreement states in Article II as one of its policies that "The discharge of toxic substances in toxic amounts be prohibited and the discharge of any or all persistent toxic substances be virtually eliminated." Annex 12 further states as one of the general principles that "the philosophy adopted for control of inputs of persistent toxic substances shall be zero discharge."

We suggest that the Ministry develop working definitions and policies for the implementation of zero discharge and virtual elimination. We propose that zero discharge apply to new facilities; this implies closed loop systems. Such stringent controls are appropriate especially for chemicals which are known to be highly toxic and/or persistent. Virtual elimination would apply in an ecosystem approach, which would by definition be a multi-media consideration. Concurrently, work should begin on the compilation of a multi-media data base that would contain concentrations of contaminants across Ontario.

The Ministry should also examine the concept of Pollution Prevention for implementation in Ontario. The Pollution Prevention Act of 1990 requires the U.S. EPA to develop and promote multi-media approaches to source reduction. The central tenet of this strategy is the reduction at source of toxic chemicals through an examination of current processes in order to find alternatives. While the Ministry has a number of initiatives (MISA, CAP and the

proposed sustainable waste management strategy) they do not go far enough to force industries to evaluate processes and change them. Environment Canada is also investigating Pollution Prevention, as noted in the Green Plan.

In working towards zero discharge and virtual elimination, a number of approaches are available which could be implemented singly or in combination.

1. Best Management Practices (similar to Pollution Prevention)

Such practices encourage the examination of processes with the aim of eliminating the use of persistent toxic substances.

2. Technology Based

This strategy mandates the use of best technologies to reduce emissions (similar to current MISA); however, some mechanism (goals or targets) need to be included to "force the technology development".

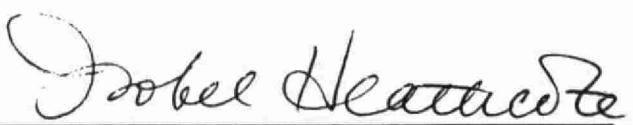
3. The Certificate of Approval process could be revamped to integrate all media inputs and impacts. The current system suffers from a very narrow approach. The multi-media approval approach is being attempted in Massachusetts, known as the Blackstone Project.
4. A system of awards or the publicizing of innovative/effective approaches developed by industry could be implemented to recognize and encourage action.
5. Finally the "sunsetting" of chemicals (being developed by OECD) is an effective method. This involves the phasing out of the use and production of contaminants which are persistent, toxic and multi-media. This is done according to a timetable (eg. 50% reduction in 5 years, 75% over 8 years). An effective demonstration project would be to target one to three substances with definite goals and timeframes for "sunsetting", such as mercury, lead and benzene.

Recommendation

We recommend that a consultant be hired to study and report back quickly on the feasibility of fast tracking the sunsetting of two or three especially toxic, persistent multi-media contaminants (option 5 above). Socio-economic implications and the regulatory framework (compliance and monitoring) would also be investigated.



Mark T. Goldberg
Chair
Advisory Committee on
Environmental Standards



Isobel Heathcote
Chair
Municipal-Industrial Strategy
for Abatement Advisory Committee

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January 31, 1991

Honourable Ruth Grier
Minister of the Environment
135 St. Clair Avenue West
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Toronto, Ontario
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Dear Minister:

We are writing to you to bring you up to date on events that have taken place regarding the issues of zero discharge and virtual elimination since our letter of January 8, 1991.

The Virtual-Elimination Task Force established by the International Joint Commission will be releasing a report in early March on a strategy to virtually eliminate the input of persistent toxic substances to the Great Lakes Basin Ecosystem. The first substances to be considered will be mercury and PCB's. This report will be based on work that has been contracted out regarding technological opportunities, legislation and the economic implications of actions taken or not taken. In fact, one of the contracts will deal specifically with the implications of developing a sunset protocol for persistent toxic substances in the Great Lakes Basin Ecosystem. Although the IJC report will deal with many jurisdictions in both Canada and the U.S. we anticipate that some aspects will be relevant to our work.

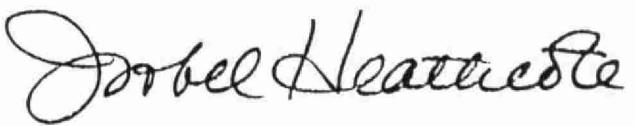
We have been invited to participate in the discussions following the release of the report. We have also been invited to participate in another IJC initiative which will involve Round Table discussions in May on the use of Lake Superior as a demonstration project for Zero Discharge.

In our letter of January 8th, 1991 we proposed contracting a consultant to study the feasibility of sunsetting certain persistent and toxic pollutants. We now propose delaying any further work by the ACES/MAC Subcommittee until we can assess the implications of the IJC Task Force report. In this manner we may benefit from their findings. After we have had the opportunity to study their reports, we will provide you with further recommendations.

Yours sincerely,



Mark T. Goldberg
Chair
Advisory Committee
on Environmental Standards



Isobel Heathcote
Chair
Municipal-Industrial Strategy
for Abatement Advisory
Committee

APPENDIX B.4

MISA ADVISORY COMMITTEE

CORRESPONDENCE REGARDING

MUNICIPAL WATER CONSERVATION

- Letter to the Honourable Jim Bradley, Re: MAC's Water Conservation Report and Ministry of Natural Resources' Proposal, August 20, 1990.
- Letter and Document to the Honourable Ruth Grier, Re: MAC's Summary Report on "Water Conservation in Ontario: Implementing the User Pay System to Finance a Cleaner Environment", January 18, 1991.



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August 20, 1990

The Honourable Jim E. Bradley
Minister of the Environment
135 St. Clair Avenue West
15th Floor
Toronto, Ontario
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Dear Mr. Minister:

Recently, your **MISA Advisory Committee** had the opportunity to review a draft document prepared by the Ministry of Natural Resources, entitled "Toward A Water Efficient Ontario - A Partnership Strategy for Encouraging Efficient and Sustainable Water Use In Ontario". This document was of particular interest to us because we are in the process of completing a report on the same subject. We note also the recent passing of a bylaw in the City of Toronto, requiring a number of water conservation measures including full-cost pricing of water and sewerage.

The issue of water conservation is of utmost concern to your committee, insofar as wasteful water use, and inadequate maintenance of infrastructure, now impact significantly on receiving water quality. MISA's municipal sector is gravely affected by issues of water use.

MAC's water conservation report is still in draft form, and is currently undergoing technical editing and revision. However, your committee is concerned that events may be overtaking us in that MNR's proposal seems well advanced in the approval process. MAC feels that the MNR proposal is premature and incomplete in some respects, particularly the role of MOE and the municipalities, and we will soon be sending comments in that vein to MNR. MAC believes that water conservation is an issue that requires the participation and cooperation of many agencies and jurisdictions. In consequence, your committee would prefer a government-wide initiative, with participation from all affected stakeholders, over a single-ministry initiative such as is proposed by MNR.

MAC's draft water conservation report raises some basic issues in this regard, and may merit your attention even before it is polished and finalized. We are therefore attaching a single draft copy for your information. The final version should be available within the next two months.

We trust the foregoing will be of assistance and we would be pleased to discuss the findings with your office.

Yours very truly,

Dr. Isobel Heathcote
Chairman
MISA Advisory Committee

Encl.



Ministry
of the
Environment

Ministère
de
l'Environnement

Ontario

135 St. Clair Avenue West
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Toronto, Ontario
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January 18, 1991

The Honourable Ruth Grier
Minister of the Environment
15th Floor
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

Dear Mrs. Grier:

Your MISA Advisory Committee is pleased to present herewith its summary document "Water Conservation in Ontario: **Implementing the User Pay System to Finance a Cleaner Environment**". This document summarizes the findings of a much longer report which will be sent to you in the next two weeks.

MAC believes this summary document is important for several reasons:

- It presents information regarding the staggering potential costs of repairs, replacement, and upgrading of Ontario's water and sewer systems.
- It demonstrates the central importance of water conservation measures and an equitable "user pay" system in protecting infrastructures and generating funds for municipal capital expenditures.
- It underlines the need for an integrated provincial water conservation initiative, rather than local and more limited strategies.

MAC believes that water conservation is intimately tied to issues of water quality and to the entire MISA process. Many agencies are now recognizing the importance of this issue. It is essential that the Ontario Government coordinate these efforts and begin to involve the public in them.

Your committee would be pleased to meet with you or your staff to discuss the implications of this report, and to begin to plan for water conservation in the future.

Yours very truly,

A handwritten signature in black ink, appearing to read "Isobel W. Heathcote". The signature is fluid and cursive, with "Isobel" and "W." being more stylized and "Heathcote" being more clearly legible.

Isobel W. Heathcote
Chair
MISA Advisory Committee

Attach.

**WATER CONSERVATION IN ONTARIO:
Implementing the User Pay System
to Finance a Cleaner Environment**

SUMMARY DOCUMENT

January 1991

MISA ADVISORY COMMITTEE

APPENDIX B.5

MISA ADVISORY COMMITTEE

CORRESPONDENCE REGARDING

THE MISA ANALYTICAL PROGRAM

- Letter to the Honourable Jim Bradley, Re: MAC's Concern regarding the QA/QC Program, May 8, 1990.



Ministry
of the
Environment

Ministère
de
l'Environnement

Ontario

May 8, 1990

135 St. Clair Avenue West
Suite 100
Toronto, Ontario
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135, avenue St. Clair ouest
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The Honourable Jim E. Bradley
Minister of the Environment
15th Floor
135 St. Clair Avenue West
Toronto, Ontario
M4V 1P5

Dear Sir:

For some time, your committee has been concerned over the QA/QC Program conducted by the Ministry to ensure the assembly of accurate and comparable data in the MISA Effluent Monitoring Program. Letters were written on October 20, 1988 February 10, 1989 and April 6, 1989 on this concern. Responses were received from Mr. Crawford of the LSB on October 17, 1988 and through a visual presentation made by Mr. Gerry Ronan on the Support Role of the Laboratory Services Branch to the MISA Program on January 27, 1990.

However, recent comments expressed to us by industry and certain commercial testing laboratories would indicate that our original concerns may still be justified.

In this respect, we refer to Mr. Ronan's Laboratory Performance Management Plan, a copy of which is attached hereto.

Can we be advised if the following are in hand?

We refer specifically to the **DATA VALIDATION PROGRAM**.

C. Workload

C 1 QA/QC Program

Technical Advisory Role

- Supporting Documents to Regs.
- Policies and Protocols
- Methods
- Lab QA Workshops

Lab Inspection and Audit

- Components of Inspection/Audit
- Activities
- Workload

Round Robins

- Initial Focus on Large Labs
- Organics
- Four Studies per year
- Organics
- Inorganics

6600 to 17,000 data points per year

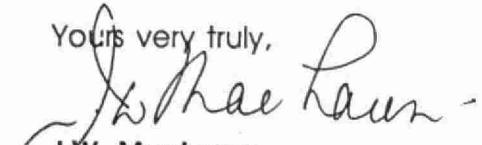
* C.2 Effluent Audit Samples

/Cont'd

The Committee is especially concerned over the items marked with an asterisk. Would it be possible to receive some written response to the foregoing prior to our next scheduled meeting of May 25th, 1990 and to have someone present at that meeting who could speak on the progress and relieve this Committee's concern.

We thank you for your continuing support.

Yours very truly,



J.W. MacLaren
Chairman
MISA Advisory Committee

Encl.

JM:fc

cc: G. Posen
D. Balsillie
P. Seto

Data Validation

KEY MOE LSB TASKS:

- Define methodological principles
- Establish method performance criteria
 - precision(MDL)
- Establish guidelines for
 - lab performance evaluation
 - project QA data interpretation
- Implement lab comparability studies
- Evaluate labs accuracy/recovery
- Institute lab inspections

Data Validation

LSB AUDIT OBJECTIVES

- To provide an independent MISA lab audit function necessary to establish the integrity of the MISA Analytical Data Base
- To provide analytical support for effluent audit samples taken by Ministry personnel

Workload (Estimated)

1. QA/QC Program

- Technical advisory role
- Lab inspections/audits
- Round-robbins

2. Effluent Audit Samples

- Workload considerations
- Total MISA workload
- Comparison to current test load

Workload (Estimated)

QA/QC PROGRAM

TECHNICAL ADVISORY ROLE

- Supporting Documents to Regulations
 - Method detection limits protocol
 - GC/MS characterization
 - Elemental scan characterization
 - MISA training manual
- Policies and Protocols
 - QM planning
 - Control charting
 - Audit
 - Sample logistics and handling
 - Data review and reporting
- Methods
- Lab QA workshops

Lab
Misa
Program

Workload (Estimated) QA/QC PROGRAM

LAB INSPECTIONS AND AUDITS

- Components of Inspection/Audit Activities
 - Sample tracking
 - Sample preservation/Storage
 - Initiation of analysis
 - Analytical methods
 - Data reporting
 - Safety, security
 - QC data availability & use
 - Control procedures
 - QC activities/Follow-up
- Workload (1989-90)
 - Up to 60 commercial labs (large)
 - Up to 140 industry labs (small)

Lab
Misa
Program

Workload (Estimated) QA/QC PROGRAM

ROUND-ROBINS

- Initial focus on:
 - Large labs in Ontario
 - Organics
- Four "studies" per year
 - Organics -10 to 15 labs/study
 - 60 to 100 tests/study
 - up to 9 samples/study
 - 5400 to 13500 data points
 - Inorganics -20 to 30 labs/study
 - 10 to 20 tests/study
 - up to 6 samples/study
 - 1200 to 3600 data points
- 6600 to 17000 data points per year to allow for performance review

**Lab
Misa
Program**

Workload (Estimated) QA/QC PROGRAM

ACTIVITY

**Technical
Advisory
Role**

**Inspections
And Audits**

**Round-
Robins**

OUTCOME

- Program initiated with sound QM practices, protocols & procedures
- Appropriate methodology
- Assurance of lab compliance to regulatory requirements
- Satisfactory implementation of control practices
- Provides for review of accuracy of standards and method performance
- Promotes improved lab performance

**Lab
Misa
Program**

Workload (Estimated) EFFLUENT AUDIT SAMPLES **

WORKLOAD CONSIDERATIONS

- Requires matrix specific methods
 - Longer sample prep's
 - Lower productivity
- Two samples per pipe per year during monitoring regulation
 - Conventional (12/sample)
 - Metals (20/sample)
 - Elem scan (70/sample)
 - Organics (114/sample)
- One sample per pipe per year
 - Characterization (150 + tests/scan)
- 300 Dioxin tests/year

**** Includes split samples**

Lab
Misa
Program

Workload (Estimated) EFFLUENT AUDIT SAMPLES

TOTAL MISA WORKLOAD

	1989-90 *	1990-91 **
Convent'l tests:	10,080	18,120
Metal tests:	16,800	30,200
Elem. Scan tests:	58,800	105,700
Org. tests:	95,760	172,140
Charact'n tests:	63,000	113,250
Dioxin	300	300
# of pipes =	420	755

* Industrial sector regs

** Industrial & municipal regs

Lab
Misa
Program

Workload (Estimated) EFFLUENT AUDIT SAMPLES

COMPARISON TO CURRENT TEST LOAD

	CURRENT	MISA	
		89 - 90	90 - 91
Inorganics	1,228,000	27,000 (2.2 %)	48,000 (3.9 %)
Elem. Scan tests	19,000	59,000 (311 %)	106,000 (558 %)
Organics	758,000	95,000 (13 %)	172,000 (23 %)
Char'n scans	1,230	840 (68 %)	1,510 (123 %)

MOE/MIS/1990-1/ANRQ
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MOE/MIS/1990-1/ANRQ